(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 6 May 2005 (06.05.2005)

PCT

(10) International Publication Number WO 2005/039396 A2

(51) International Patent Classification7:

A61B

(21) International Application Number:

PCT/US2004/035363

- (22) International Filing Date: 22 October 2004 (22.10.2004)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/513,355

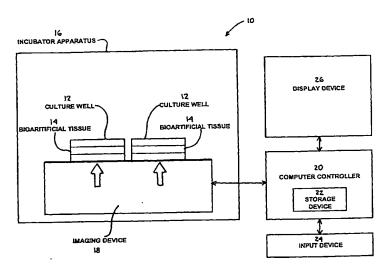
22 October 2003 (22.10.2003) U

- (71) Applicant (for all designated States except US): MED-TRAIN TECHNOLOGIES, LLC [US/US]; 437 Dimmocks Mill Road, Hillsborough, North Carolina 27278 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BANES, Albert, J. [US/US]; 1821 Coleman Loop Road, Hillsborough, North Carolina 27278 (US). MALONEY, Melissa, Marie [US/US]; 105 Bel Arbor Lane, Carrboro, North Carolina 27510 (US).

- (74) Agents: BYRNE, Richard, L. et al.; Webb Ziesenheim Logsdon Orkin & Hanson, P.C., 700 Koppers Building, 436 Seventh Avenue, Pittsburgh, Pennsylvania 15219-1818 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: TISSUE ENGINEERED CONSTRUCT ANALYTICAL IMAGING SYSTEM AND METHOD OF OBTAINING AND ANALYZING IMAGES OF TISSUE ENGINEERED CONSTRUCTS



(57) Abstract: Disclosed is a tissue engineered construct analytical imaging system (10) for use with culture wells (12) having tissue engineered constructs therein, which are positionable in an incubator apparatus (16) or other enclosed environment. The system (10) includes an imaging device (18) in operational communication with the enclosed environment for obtaining data reflective of a well area of interest in the culture well (12), without the removal of the culture well (12) from the enclosed environment. A computer controller (20) can receive data from the imaging device (18), analyze the data and determine desired parameters within the well area of interest and/or output data reflective of the results of the analysis. A computer-implemented method of obtaining and analyzing images of tissue engineered constructs is also disclosed.



WO 2005/039396 A2



Published:

 without international search report and to be republished upon receipt of that report For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.